



Examiners' Report

Principal Examiner Feedback

Summer 2023

Pearson Edexcel GCE in

AS Geography (8GE0/01)

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Introduction

This is the sixth year of examinations for 8GE01. The paper saw the continued assessment of physical geography ideas, testing knowledge of tectonics, with a choice between glaciation and coastal landscapes. Candidates were asked to look at the synoptic links between physical geography processes in St Elias-Wrangell mountain range (Glaciation) and Costa (Coastal landscapes) and to evaluate the relative significance, and interaction, of these processes.

In a year where students continued to be affected by the ongoing legacy of the Coronavirus Pandemic, and GCSEs with reduced content, this paper marks a return to full pre-pandemic breadth of questions:

- The fieldwork scenarios have been returned, together with the need for centres to prepare candidates for both human and physical scenarios, as well as providing those first-hand fieldwork opportunities. It is important to note many candidates will not have experienced these at GCSE.
- Advanced information was not provided.

The quality of knowledge and understanding shown continues to be impressive, however this year perhaps more for coasts than glaciation. Candidates again seemed prepared for answering the longer 12- mark assess and 16-mark evaluate questions. There were mixed reactions to the 9-mark 'fieldwork assess' questions. However, candidates continue to struggle to organise their ideas in the most effective way – looking to write clear evaluative paragraphs would help many responses score one level higher.

1a	This question caused no problems for the vast majority of candidates. Many of the responses offered were almost always rooted in the detailed content outlined in Key Idea 1.3a of the specification, however there was a good range of ideas that had been learnt from across the Tectonics part of the specification.
1b i	This question also posed few problems. Candidates seem well aware of the need to include comparative vocabulary to write their statements (e.g. more / less, whereas), and most also noted the need to make two different comparisons.
1b ii	<p>'Suggest' questions are the first opportunity in the paper to start differentiating between candidates on the basis of geographical skill.</p> <p>Although a number repeated their response to the previous question (i.e. they described the graph), most recognised the need to instead make suggestions about sensible concerns a government might have had about the increasing frequency and magnitude of earthquakes in their country. Those that did make sensible suggestions were almost always then able to extend their ideas enough to achieve a second mark. It is worth noting that whilst many candidates wrote about concerns regarding developing countries, this (or indeed any knowledge of Iraq or Iran) was not required to perform well in this question.</p> <p>As with previous exam series, candidates need to extend their explanations with one further idea to explain why that concern might exist.</p>

<p>1c</p>	<p>Many candidates provided a range of ideas that were suitably significant; most choosing to write about the global impacts of the eruption at Eyjafjallajökull in Iceland, or the impact on global trade following the earthquake and tsunami in Japan. The mark scheme allowed many different types of impacts as long as they demonstrated an understanding of how they had the aforementioned regional or global impact. Weaker responses provided information that could have been true of simply hazards or disasters on a local scale.</p> <p>Following the June 2022 exam, the re-occurrence of 'megadisaster' will provoke discussion about the conflicting definitions of 'megadisaster'; it is again important for centres to realise that the 'detailed content' in the specification expects centres to teach a 'located example' with a global or regional significance. That said, located detail was not required to achieve full marks on this question. However the mark scheme recognised that candidates might use this to extend their ideas. Some responses used figures and statistics that reflected definitions that are available, particularly for 'disaster' vs 'hazard', however it is worth noting there no equivalent definitive facts that characterise megadisasters.</p>
<p>1d</p>	<p>This question, again reflecting a similar question in the June 2022 was also answered well by many candidates. Many demonstrated secure knowledge displayed about tectonic processes at convergent and divergent boundaries, or at hotspot locations. The best responses referred to detailed processes such as slab-pull, subduction, mantle plumes etc at named locations. A few candidates lost perspective on the idea of eruption, choosing instead to write about the global spread of the physical impacts of volcanoes, e.g. ash after the eruption of Mt Pinatubo.</p>
<p>1e</p>	<p>Candidates seem well used to resource-based 12-mark questions featuring in the tectonics section of the paper. The resource in this paper was focussed on the Ridgecrest earthquake in 2019, structured around the hazard response cycle which should be familiar to students, together with other elements of enquiry question 3 regarding the management of tectonic hazards.</p> <p>Most candidates adopted a structure of commenting on different strategies with many utilised the data to provide evidence to back these comments up. Better responses commented on both positive and negative impacts of the strategies – perhaps one paragraph per strategy with a mini-conclusion at the end. The very best had a deliberate approach to order of these paragraphs, perhaps based on the hazard response cycle and returned to the model in their conclusion. Others reflected on vulnerability or pressure-and-release model, or type of loss, either economic or social. Sometimes the use of vocabulary accentuated the discussion (e.g. furthermore, the most important strategy) as they considered how the impact of one strategy had itself an impact on another.</p> <p>Despite these type of questions being asked many times in 8GE01, it was unusual to see so many candidates choosing to use a variety</p>

	<p>of located examples to develop their argument, often including two or three examples across the response. This is not required for this type of question – and the wording of the question was designed deliberately to reinforce the focus on ‘these earthquakes’. The 3 AO1 marks are best achieved through using Geographical Knowledge and Understanding to interpret the resource, whilst the bulk of the marks for AO2 are for the quality of the argument. This does not mean there is no place for located examples; it is just hard to make good use of that detail to answer the question.</p>
2a i	<p>This question was answered well by the vast majority of candidates, however a significant number responded with the words for erosion processes, e.g. abrasion.</p>
2a ii	<p>This question was similar to one in the June 2002 paper – requiring candidates to calculate the length of a line on an OS map, and do the appropriate conversion using the scale bar.</p> <p>As in June 2022, the difficulties came:</p> <ul style="list-style-type: none"> • through inaccurate measurement of line AB. The rubric for the exam paper has always required candidates to bring a ruler; • calculating the correct conversion using the scale bar. <p>The mark scheme therefore allowed for errors to be carried forward and recognised that 3 steps were required for this 2-mark question. As a result, candidates who had included their working out were rarely penalised enough to prevent them securing full marks. However, a number of candidates did not spot the requirement to state the answer to 1 decimal point.</p>
2a iii	<p>The idea of landscape having value is familiar to centres – particularly that of glacial and periglacial landscapes. There are three sections of detailed content in the specification that prompted candidates to many clear and sensible suggestions about the value of this particular landscape. Most focused on idyllic natural beauty or the scientific importance of landforms. As always with ‘suggest’ questions the skill is to extend the response through explanation and many achieved this by writing about particular stakeholders and often the impact their interests might have on the local economy. Like question 1bii, only a few candidates were able to develop it further to achieve the third mark.</p>
2b	<p>Many candidates answered this question well, producing clear explanations of the natural causes of climate change. Most candidates focussed on sunspots, volcanoes and various aspects of the Milankovitch cycles. To achieve the second mark in explanation it was necessary to explain how climate might have changed, perhaps with a link to why temperatures would increase or decrease. A number of candidates describe the causes, rather than making that link. There were also many impressive explanations of Precession, Obliquity and Eccentricity – although these were not required to achieve full marks on this question.</p>
2c	<p>This question caused few problems to candidates and they achieved level 2 with a good understanding of depositional landforms and the logical connection to how they showed ice extent and movement. Although not necessary, most provided 2 paragraphs: one about ice extent and the other about movement.</p>

	<p>Many wrote about appropriate deposition landforms, particularly drumlins, and moraine. The stronger responses provided clear detail about how these landforms would aid reconstruction, perhaps explaining the formation of stoss and lee slopes on a drumlin. Weaker responses did not distinguish between erosional and depositional landforms, and some confused different types of moraine. A few also wrote about roche montonee, which is not a depositional landform.</p> <p>Finally, on physical geography questions like this, AO1 knowledge is most likely demonstrated through detailed and accurate understanding of processes and landforms. Although welcome, located detail was not required to achieve full marks.</p>
2d	<p>This question was challenging to many candidates but many gave it a good go. Most were clear about how glacial meltwater / fluvioglacial landforms play an important role in glaciated landscape. However not many appreciated their important role in this glacial landscape but wrote very good explanations of the role that ice played. Once that link had been achieved for level 2, candidates were then able to reflect on the broader interpretation of the question, noting a range of other factors that were importance in glaciated landscapes. Better responses continued to show the link between these factors and meltwater and some noted the significance of warm-based glaciers in allowing glaciation to dominate the role of tectonics.</p> <p>A few candidates who achieved level 3 remembered to make judgements about the relative role of the two sets of processes; most did this through considering timescale, or indeed the relatively small spatial scale that meltwater operates at.</p>
3ai	This question caused no problems for candidates.
3aii	This question caused no problems for candidates.
3aiii	This question caused no problems for candidates.
3aiv	<p>This style of question might have been familiar to candidates answering questions about unfamiliar fieldwork scenarios at GCSE Geography. It is the first time a question like this has been posed at AS-Level, however it is rooted in the geographical enquiry process outlined in the specification.</p> <p>Candidates found it hard to identify a hypothesis that went beyond the idea of corrie orientation but a number explained their suggestion by writing about relative shade or exposure to the sun. Recognising the difficulty, the markscheme expected candidates to recognise elements from the scenario and link them to different types of geographical enquiry (e.g. correlation / pattern etc).</p> <p>Ultimately, the best way to prepare candidates for this type of question is to involve them in the enquiry planning process, or to help them co-construct a hypothesis before beginning their actual fieldwork.</p>
3av	There was a mixture of responses to this question. A large number candidates kept their responses focussed on corrie orientation so found it hard to identify different fieldwork methods and then explain them. However, others noted the question stem and

	<p>evolving scenario development, which gave them the opportunity to utilise their own fieldwork experience. Those with fieldwork experiences that had been planned to investigate 'glacial and/or fluvio-glacial landform morphology and orientation' were most able to find different methods. The second mark required students to explain why their chosen technique would allow them collect such information.</p>
3b	<p>Because it is not the first time at AS that questions have been asked about secondary data, candidates seemed well-prepared and answered this question well. Almost all seemed to focus their fieldwork enquiry on the Lake District. As a result, many wrote about their use of academic papers (with a particular focus on Evans and Cox) to find alternative data about corrie orientation. Weaker responses merely described the use of the paper. For weaker candidates the acronym SAQ (Safety, Accessibility, Question focus) might help provide a structure to future teaching about evaluation of enquiry sources.</p> <p>Better responses recognised and explained why it was useful for (a) certain stage(s) of the enquiry process. Stronger responses realised the need to write more about why the value of that source might have changed and different stages of the process, but this was done better through the identification of other secondary sources. The best responses compared these sources, making judgements about which secondary sources were best, at which time.</p>
4	<p>Candidates made good use of the resources to explain the interaction of tectonic and glacial processes operating in the St.Elias-Wrangell mountain range. It was a challenging scenario! Most looked at tectonics and glaciation separately, but the best found a different way to structure their answer that looked at both throughout.</p> <p>To reach level 2, it was enough to explain the how tectonic activity had helped to form the landscapes show in the different sources. Without that explanation, some responses struggled to score higher than level 1. However a number of candidates chose to focus on glacial instead, and this was creditable in level 2 as long as there was some reference to tectonics. Most candidates felt glacial processes did dominate the landscape and for level 3 there was a need for candidates to make an assessment about which processes did contribute the most; synopticity tended to come from either identifying the causal, or complex, interaction between them, or bringing knowledge from beyond the resources to explain their answer to the question. The best response adopted a highly evaluative approach with a series of paragraphs, each dealing with different parts of the landscape, engaged in a discussion between tectonics and glaciation. The evaluation then tended to concentrate on the positive/negative contribution, or speeding up/down by one set of the other, and indeed even what scale a landscape could be regarded as distinctive. Most concluded that tectonics was the most important.</p>

	<p>The best advice might be to encourage candidates to plan their answer before they engage too fully with the resource. There can be a lot of information in these synoptic stories. Sifting through it to make an argument is likely to create a more coherent answer than a narrative of the resource, figure by figure.</p>
5ai	This question caused no problems for candidates.
5aii	<p>This question was similar to one in the June 2002 paper – requiring candidates to calculate the length of a line on an OS map, and do the appropriate conversion using the scale bar.</p> <p>As in June 2022, the difficulties came:</p> <ul style="list-style-type: none"> • through inaccurate measurement of line AB. The rubric for the exam paper has always required candidates to bring a ruler; • calculating the correct conversion using the scale bar. <p>The mark scheme therefore allowed for errors to be carried forward and recognised that 3 steps were required for this 2-mark question. As a result, candidates who had included their working out were rarely penalised enough to prevent them securing full marks. However, a number of candidates did not spot the requirement to state the answer to 1 decimal point.</p>
5aiii	<p>5aiii nearly all, candidates, give a reason why the landscape had value, and the majority developed it to gain maximum marks (the same could apply for the glaciation question)</p> <p>The idea of landscape having value is familiar to centres – however this is the first time a question has been asked specifically about amenity value.</p> <p>Many candidates were able to make a variety of clear suggestions about the value of this particular landscape. Most focussed on the large open beach and opportunities this would create for tourists to visit the local towns, spend money, and benefit the local community. Others focussed on the scientific value of the dunes. Some candidates wrong the value of the beach as a coastal defence. Although their follow-on explanations were high in quality, they were not creditable because the AO2 starter mark must be rooted in the resources; in this case the beach is not acting as a coastal defence. The AO1 explanation marks are always awarded as an extension of the AO2 starting suggestion.</p>
5b	<p>Many candidates answered this question well – there were many clear explanations about geological structure. Most candidates focussed on alternating hard and soft rock in the form of discordant coastlines. Others wrote about unconsolidated material, or dip or complex cliff profiles. These tended to result in highly technical explanations that linked these factors to coastal landforms. Weaker responses confused geological structure with lithology – focussing on just hard or soft rock.</p>
5c	<p>This question caused few problems to candidates. Although not necessary, most provided 2 paragraphs: one about transport and the other about deposition. Many wrote about appropriate deposition landforms, particularly spits and salt marshes. Some provided clear explanation about the role of flocculation and</p>

	<p>gravity settling; terms not used on the specification but helpful ways to provide accurate geographical detail (although not the only way to get full marks). By the time candidates provided detailed explanation about recurved spits, cusped forelands they were often clearly into level 3 for accurate geographical knowledge.</p> <p>Like in 2c, with physical geography questions like this, AO1 knowledge is most likely demonstrated through detailed and accurate understanding of processes and landforms. Although welcome, located detail was not required to achieve full marks.</p>
5d	<p>This question was challenging to many candidates. However, the majority were still able to explain how the rate of coastal recession has something to do with eustatic sea level rise. The relationship is probably not in the typical mindset of an AS Geography student; most wanted to explain how eustatic sea level rise causes coastal flooding. Some were able to connect this to the retreat of deltas (e.g. the Nile) or damage done by coastal erosion in low-lying islands (e.g. the Maldives). Once that link had been made, however superficial, it was possible access level 2 marks.</p> <p>Better responses went further to explain how marine processes were more likely to cause cliff retreat over time. The strongest responses recognised that eustatic sea level rise does not, in reality, play as significant role as that of geology or coastal management. That judgement was often enough for candidates to achieve the marks for level 3. The best responses looked a variety of factors that affected the rate of recession and noted the relationship to eustatic sea-level rise, perhaps countering or allowing it to be more effective. Located examples also helped these responses score the highest marks.</p> <p>It is worth centres remembering that 12-mark 'assess' questions are constructed by criss-crossing two distinct areas of the specification. There are more marks for 'AO2' than 'AO1'. As a result candidates will perform better on these questions if they are prepared to think on their feet rather than simply being able to write rehearsed answers about physical processes.</p>
6ai	This question caused no problems for candidates.
6aii	This question caused no problems for candidates.
6aiii	This question caused no problems for candidates.
6aiv	<p>This style of question might have been familiar to candidates answering questions about unfamiliar fieldwork scenarios at GCSE Geography. It is the first time a question like this has been posed at AS-Level, however it is rooted in the geographical enquiry process outlined in the specification.</p> <p>Candidates found it hard to identify a hypothesis that could go beyond the idea of prevailing wind direction. However a number explained their suggestion by writing about longshore drift or the associated size of pebbles or beach. Recognising the difficulty, the markscheme allowed candidates to recognise elements from the scenario and link them to different types of geographical enquiry (e.g. correlation / pattern etc).</p>

	<p>Ultimately, the best way to prepare candidates for this type of question is to involve them in the enquiry planning process, or to help them co-construct a hypothesis before beginning their actual fieldwork.</p>
6av	<p>There was a mixture of responses to this question. A large number of candidates kept their responses focussed on longshore drift and sediment analysis – and also achieved the second mark which required them to explain why their chosen technique would allow them to collect relevant information for the fieldwork scenario presented.</p>
6b	<p>b This was quite challenging for some candidates, particularly from centres whose main focus in the fieldwork investigation was primary data collection. In their own fieldwork investigation, they were much more successful.</p> <p>A minority misunderstood the question and focused on primary data and a few unfortunately did not identify a hypothesis or enquiry question. Many candidates did not focus on the use of secondary data at different stages of the enquiry.</p> <p>Because it is not the first time at AS that questions have been asked about secondary data, candidates seemed well-prepared and answered this question well. Whichever resources are used, it is important for candidates to recognise and explain why they were useful for certain stages of the stated enquiry process. There were some excellent examples based on the Holderness coast which included the use of Google Maps, old maps of the coastline and published photos over time from newspapers etc. These helped in the planning phase to get an understanding of the environment and changes that had taken place. Websites like magicseaweed were used to help judge the timing of visits (and the potential impact of tide on beach size). Shoreline management plans were often used later in the investigation to support evaluation of techniques and fieldwork overall.</p> <p>Stronger responses realised the need to write more about why the value of that source might have changed and different stages of the process, but this was done better through the identification of other secondary sources. The best responses compared these sources, making judgements about which secondary sources were best, at which time. Candidates from centres who had developed a more holistic approach to the enquiry process generally performed better.</p>

	<p>Weaker responses merely described the use of the sources; a significant number of candidates incorrectly focused on primary data collection. For weaker candidates the acronym SAQ (Safety, Accessibility, Question focus) might help provide a structure to future teaching about evaluation of enquiry sources.</p>
7	<p>Candidates made good use of the resources to explain the interaction of tectonic and coastal processes operating on the two contrasting coastlines of Costa Rica. As with the glacial option, this was a challenging scenario! To reach level 2, it was enough to explain the how tectonic activity had helped to form the landscapes shown in the different figures. Without that explanation, some responses struggled to score higher than level 1. However, a number of candidates chose to focus on coastal instead, and this was creditable in level 2 as long as there was some reference to tectonics.</p> <p>Most candidates felt coastal processes did dominate the landscape and for level 3 there was a need for candidates to make an assessment about which processes did contribute the most; synopticity tended to come from either identifying the causal, or complex, interaction between them, or bringing knowledge from beyond the resources to explain their answer to the question. The best response adopted a highly evaluative approach where a series of paragraphs, each dealing with different parts of the landscape, engaged in a discussion between tectonics and coastal (or river) processes. The evaluation then tended to concentrate on the positive/negative contribution, or timescale, or speeding up/down by one set of the other, and indeed even what scale a landscape could be regarded as distinctive.</p> <p>The best advice might be to encourage candidates to plan their answer before they engage too fully with the resource. There can be a lot of information in these synoptic stories. Sifting through it to make an argument is likely to create a more coherent answer than a narrative of the resource, figure by figure.</p>